

IN THE CLAIMS:

Please AMEND claims 1 and 15-37;

Please CANCEL claims 38-39 without disclaimer or prejudice; and

Please ADD claims 40-41, as shown below.

1. (Currently Amended) A packet data communication system, comprising:
at least one access network configured to provide a wireless interface between a mobile device and the at least one access network for communication of packet data;
a core network comprising at least one core network node ~~for~~
~~supporting~~configured to support communication of packet data on the wireless interface
and configured to release a data communication link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device; and
a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface and, if the monitoring indicates that the at least one condition is met, to generate and send ~~messages to the core network node~~ one or more messages in response to one or more of said one or more messages from the core network node.

2. (Original) The communication system of claim 1, wherein the controller is configured to monitor a condition associated with signal strength on the wireless interface.

3. (Original) The communication system of claim 2, wherein the controller is configured to monitor the condition, wherein the condition is associated with the signal strength, and wherein the signal strength comprises the signal strength of uplink link layer frames.

4. (Original) The communication system of claim 1, wherein the controller is configured to monitor a condition that comprises expiration of a timer.

5. (Original) The communication system of claim 4, wherein the controller is configured to monitor the condition that comprises the expiration of the timer and wherein the timer is configured to expire before the expiration of the message.

6. (Original) The communication system of claim 1, wherein the controller is configured to monitor a condition associated with paging of the mobile device.

7. (Original) The communication system of claim 1, wherein the controller is configured to monitor re-registration messages from the mobile device.

8. (Original) The communication system of claim 1, wherein the controller is configured to monitor pilot signals from the mobile device.

9. (Original) The communication system of claim 1, wherein the core network node comprises an access gateway.

10. (Original) The communication system of claim 9, wherein the access gateway comprises a packet data support node.

11. (Original) The communication system of claim 1, wherein the controller is provided in a base station controller.

12. (Original) The communication system of claim 1, wherein the controller is provided in a packet control function associated with the access network.

13. (Original) The communication system of claim 1, wherein the controller is configured to respond to messages that are sent to the mobile device on behalf of the mobile device.

14. (Original) The communication system of claim 1, wherein the controller is configured to send a notification regarding the status of the wireless interface in response to a message from the core network node.

15. (Currently Amended) A method ~~in a data communication system~~, the method comprising ~~the steps of~~:

establishing a data communication link via an access network of ~~the~~ a data communication system to a mobile device on a wireless interface between the access network and the mobile device;

sending a one or more message messages from a the core network of the data communication system to the mobile device via the access network, wherein the core network is configured to release said data communication link in the absence of a response to said one or more messages;

detecting at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met; and

subsequent to such detection, generating at the controller and sending a further message from the controller to the core network to the core of the network one or more messages in response to said one or more messages from the core network.

16. (Currently Amended) The method of claim 15, wherein the ~~step of~~ detecting comprises detecting that the signal strength on the wireless interface has fallen below a threshold.

17. (Currently Amended) The method of claim 16, wherein the ~~step of~~ detecting comprises detecting the signal strength of uplink link layer frames.

18. (Currently Amended) The method of claim 15, wherein the ~~step of~~ detecting comprises detecting an expiration of a timer that is associated with the message from the core network node.

19. (Currently Amended) The method of claim 18, further comprising:
sending the message as a response to the message from the core network before
the expiration of the message from the core network.

20. (Currently Amended) The method of claim 15, wherein the ~~step of~~ detecting comprises detecting that the mobile device has not responded to a paging message.

21. (Currently Amended) The method of claim 15, wherein the ~~step of~~ detecting comprises detecting that the registration of the mobile device in the access network has expired.

22. (Currently Amended) The method of claim 15, wherein the ~~step of~~ detecting comprises monitoring for pilot signals from the mobile device.

23. (Currently Amended) The method of claim 15, wherein the ~~step of~~ sending of the further message comprises responding on the behalf of the mobile device to the message from the core network node.

24. (Currently Amended) The method of claim 23, wherein the ~~step of~~ sending of the message from the core network node comprises a request, and wherein the data communication link is maintained only if the request is responded to within a predetermined time.

25. (Currently Amended) The method of claim 15, further comprising: ~~the step~~ ~~of~~ sending by the controller a notification regarding the status of the wireless interface to the core network.

26. (Currently Amended) The method of claim 25, wherein the ~~step of~~ sending by the controller the notification regarding the status comprises that the status of the wireless interface is expressed by a binary value.

27. (Currently Amended) The method of claim 25, further comprising:
sending the notification from the access network to the core network in response to detection that the at least one condition is met.

28. (Currently Amended) The method of claim 25, further comprising:
sending the notification from the access network to the core network in response to a message from the core network.

29. (Currently Amended) The method of claim 15, further comprising: ~~the step~~
~~of~~
buffering data packets in response to detection by the controller that the at least one trigger condition is met.

30. (Currently Amended) The method of claim 15, further comprising: ~~the step~~
~~of~~
deciding whether data packets may be dropped or buffered in response to detection by the controller that the at least one trigger condition is met.

31. (Currently Amended) The method of claim 30, wherein the ~~step of~~ deciding is made based on a local policy.

32. (Currently Amended) A method ~~in a data communication system, the method comprising the steps of:~~

establishing a data communication link via an access network of the a data communication system to a mobile device on a wireless interface between the access network and the mobile device;

detecting at a controller provided in association with the access network that the mobile device is out of reach;

notifying the core network that the mobile device is out of reach; and

in response to receiving the notification, retaining said data communication link but pausing from sending further data packets from the core network to the mobile device and processing the data packets in accordance with a predefined policy.

33. (Currently Amended) The method of claim 32, further comprising:
processing of the data packet in accordance with a local policy.

34. (Currently Amended) The method of claim 32, further comprising: ~~a step of~~

buffering data packets in response to the notification from the controller that the mobile device is out of reach.

35. (Currently Amended) The method of claim 32, further comprising: ~~a step of~~ dropping data packets in response to the notification from the controller that the mobile device is out of reach.

36. (Currently Amended) The method of claim 32, further comprising: ~~steps of~~ detecting at the controller that the mobile device can be reached, notifying the core network that the mobile device can be reached, ~~and~~ in response to receiving the notification at the core network, continuing sending of data packets from the core network to the mobile device via the data communication link.

37. (Currently Amended) A packet data communication system, comprising: establishing means for establishing a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device;

first sending means for sending a one or more message messages from a core network of the data communication system to the mobile device via the access network, wherein the core network is configured to release said data communication link in the absence of a reply to said one or more messages;

detection means for detection at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met; and

second sending means for sending a further message from the controller to the core network subsequent to such detection, wherein the core network postpones the release of said release link in response to such a further message.

38-39 (Canceled)

40. (New) A packet data communication system, comprising:

an establishing unit configured to establish a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device;

a first sending unit configured to send one or messages from a core network of the data communication system to the mobile device via the access network, wherein the core network is configured to release said data communication link in the absence of a reply to said one or more messages;

a detector configured to detect at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met; and

a second sending unit configured to send a further message from the controller to the core network subsequent to such detection, wherein the core network postpones the release of said release link in response to such a further message.

41. (New) An apparatus, which is associated with at least one access network via which a data communication link is established between a mobile device and a core network configured to release said data communication link in the absence of a response to one or more messages directed to the mobile device; wherein the apparatus is configured to:

monitor at least one condition associated with the wireless interface; and,

if the monitoring indicates that the at least one condition is met, either

generate on behalf of the mobile device and send to the core network one or more messages in response to said one or more messages from the core network or otherwise

send a message to the core network in response to which the core network postpones release of said data communication link.